

Uberboard Vapor

Installation Manual

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The information pertained within this guide is for reference only and does not supersede instructions from other product manufacturers or building codes.

Always consult and follow manufacturers specific installation and safety instructions BEFORE installing any products.

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Section 1- Planning & Understanding Steam Showers

Using the incorrect products to install a steam shower can result in installation failure. This is because steam showers requirements differ greatly from a regular shower, as containing water vapor is more difficult than simply liquid water.

Even experienced tile installers may misunderstand requirements for steam shower installation as steam showers are less common than regular showers.

For this reason we created this short guide, as an introduction to point out some basic and overlooked requirements for a successful, long lasting steam shower.

1. Waterproof? vs Vaporproof?



Many assume that all tile waterproofings can be used in a steam shower. This is false.

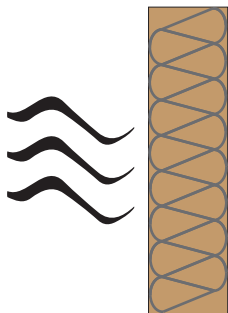
Many waterproofing products, including seamless liquid applied membranes are often NOT rated for use in a steam shower and have potential to fail.

Waterproofing products in a steam shower are tested for both for their waterproofing properties, coupled with their permeability using the permeability test ASTM E96 procedure E, at 90% RH.

The Uberboard Vapor panels are rated for steam shower use.

Uberboard Classic or Uberboard Tech waterproof panels are NOT rated for steam shower use.

2. Insulation



Proper thermal insulation is necessary to reduce water vapor transmission.

Why is this?

A high insulation R-value reduces the attraction of water vapor to outside colder, dryer air.

By reducing the attraction of the water vapor to outside air, you reduce the risk of vapor escaping the shower.

If water vapor escapes the shower, it would eventually lose energy as it cools, turning back into liquid water form, thus getting trapped within the wall cavity in the form of condensation. This water trapped in the wall cavity has the potential to cause rot, mold, decay, etc.

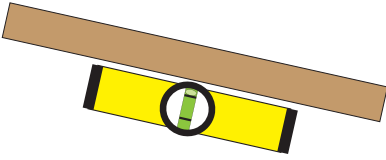
The need to provide good insulation applies to both interior walls AND exterior walls.

Check with local building codes for vapor barrier requirements on exterior walls.

3. Sloped Ceiling

It's obvious that the floor of a shower needs to be sloped to allow water to drain. What is less obvious is that in a steam shower, the ceiling needs to be sloped.

Steam rises. As it rises, it will eventually lose energy and condensate into liquid water droplets, with some droplets forming on the tiled shower ceiling. These water droplets require slope to be properly drained.



Inverted water droplets on the ceiling require excessive slope to encourage them to flow towards the wall, and then onward onto the sloped shower floor where the water will enter the shower floor drain.

For this reason the shower ceiling must be sloped at 2" per foot.

Failure to do slope the ceiling will cause water to drip down onto your head during steam shower use (potentially ruining your relaxing steam shower experience) while encouraging the potential for water damage, hard water deposits, etc.

4. Choosing a tile

All tiles are porous and will absorb, each tile having a different absorption rating depending on its production, firing, material, glaze, etc.

A true porcelain tile will have very low water absorption (less than 0.5%), making it an ideal choice for steam shower use.



When selecting a tile for steam shower use, ensure that the tile is:

- Rated for steam shower use.
- Ceramic tiles can only be used in intermittently use steam showers.
- Commercial or continuously used steam showers must use Porcelain tile.

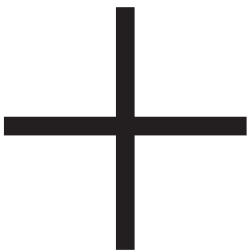
5. Choosing a grout

Grout, like tiles will absorb water, which in a steam shower is a problem. Epoxy grouts when compared to standard cement based grout absorb less water and are thus more suited for steam shower use.

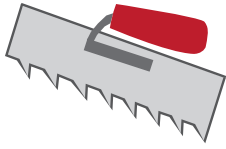
Example:

- The average cement grout has a water absorption rate of 4- 10%
- The average epoxy grout has a water absorption rate of 0.5% or less

For this reason we require all steam showers to use an epoxy grout.



6. Thinset



Thinsets are not created equal. Beyond typical jobsite discussion of “I like this brand is better than that brand” the performance of a thinset is clearly classified under ANSI and ISO standards.

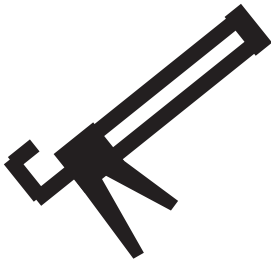
The new ISO 13007 standards include a very thorough classification of a thinsets performance, including tensile strength, deformability, and open (working) time, etc.

As the flexibility (deformability) of a thinset is important in a high stress environment, **we require the use of an ISO 13007 C2TES2 rated thinset when installing a residential / intermittent steam shower.**

Kiesel Servolight S2 thinset meets this standard, thus can be used to bond tiles in a residential / intermittent steam shower.

When installing a commercial / continuously used steam shower, you must use an epoxy thinset, which is classified under ANSI A118.3 epoxy thinset.

6. Movement Joints?



The need for proper movement joints (silicone caulk) in the finished tile installation are mandatory, however often overlooked or forgotten altogether.

The reason movement joints are so important is that they **help minimize stresses from movements within the structure, including expansion & contraction, all while maintaining a watertight seal.**

Movement joints are required by industry standard in Canada defined by the TTMAC detail 301MJ-2019-2021.

To maintain an aesthetically pleasing look, Kiesel produces color matching silicones to match the epoxy grout color for a seamless appearance.

At minimum silicone must be applied as a movement joint at these locations:

- Where the shower wall meets the shower floor
- Where the shower wall meets the shower ceiling
- Where a wall meets another wall (ie inside 90° corners)
- Where the shower curb (threshold) meets the shower floor
- Where a bench / seat meets the shower floor or shower wall
- On the inside intersections of a shower niche

Check with the silicone manufacturer for proper installation technique, the use of foam backing rods, etc.

Section 2 - Steam showers

 Warning



**DO NOT use Uberseal
in steam shower**
Use Vapor Fabric with
Uberboard Vapor panels

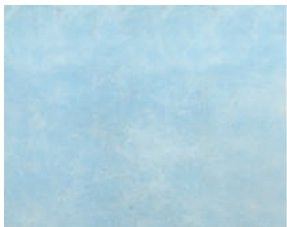


**DO NOT use Uberboard Classic
panels in steam shower**
Use Uberboard Vapor panels



**DO NOT use Uberboard Galvanized
Screws & Washers in steam shower**
Use Uberboard Stainless Steel
Screws & Washers

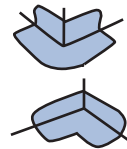
Required materials:



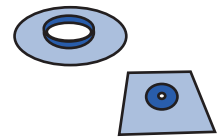
Uberboard Vapor
1/2" thick panel



Vapor Fabric
6" wide



Fabric Corners
Inside / Outside



Mixing Valve &
Pipe Seal



Stainless Steel
Uberboard™ Vapor
Washers



Stainless Steel
Uberboard™ Vapor
Screws
(for wooden studs)



Steam Shower Approved
ANSI A118.15
Thinset
(residential intermittent
use steam shower)

Required tools:



Tape Measure



Power Drill



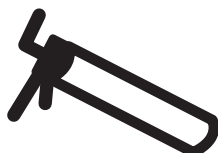
Marker / Pencil



Utility Knife
or HandSaw



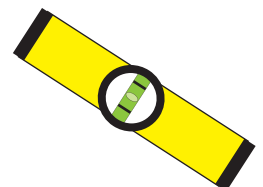
1/4"x3/16"
V-Notched Trowel



Caulking Gun

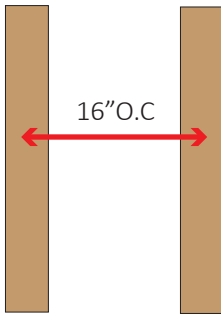


Flat Trowel



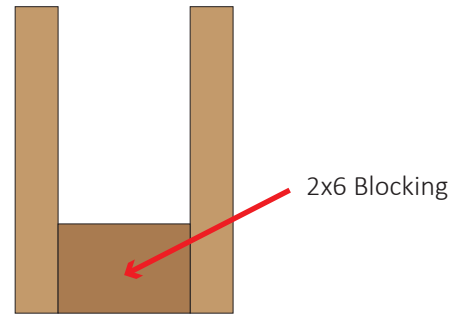
Spirit Level

Requirements studs / backing / construction:

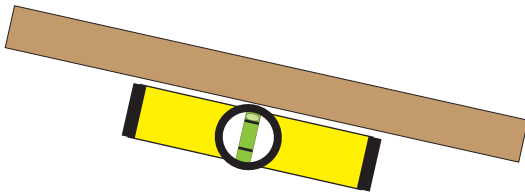


Wood studs or heavy gauge steel studs.

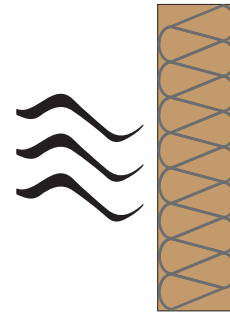
Minimum stud spacing is 16" O.C. for wall or ceiling installations.



The studwork / framing around the perimeter of the **"UberTile Pre-sloped Shower Pan"** must include blocking (2x6 blocking or greater).



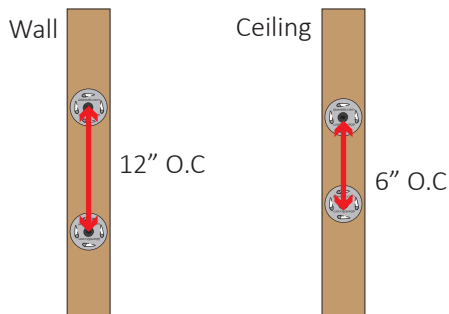
The ceiling framing must be sloped at a minimum 2" per foot to promote water vapor condensate drainage.



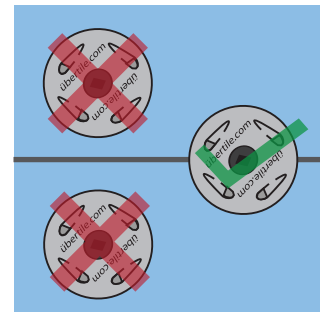
To reduce water vapor diffusion, exterior wall insulation must be upgraded, taking into consideration the dewpoint and placement of the vapor barrier.

Indoor wall cavities must also be insulated.

Fastening Uberboard Vapor Panels:

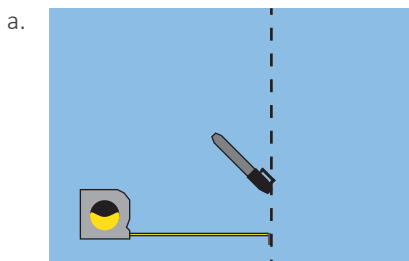


To fasten the **Uberboard Vapor Panels** to studs use **Uberboard Vapor Stainless Steel screws/washers** installed at: Walls 12" O.C, Ceilings 6" O.C.

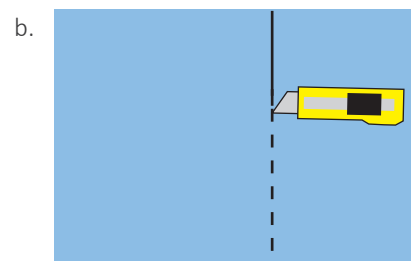


At panel seams, apply one **Uberboard Vapor Stainless Steel fastener** directly at the panel seam, with the **Stainless Steel washer** positioned so 2 teeth are in contact with each sheet.

Cutting Uberboard Panels:

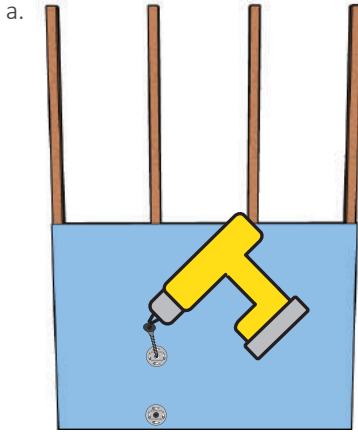


Measure and mark sheet.

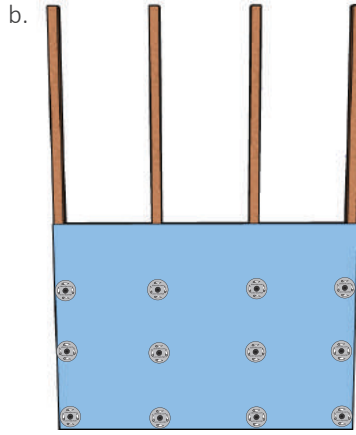


Cut with a **utility knife** or hand saw.

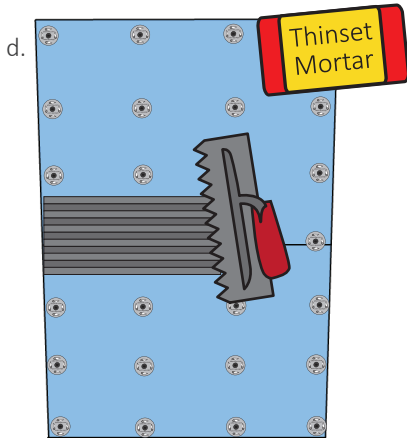
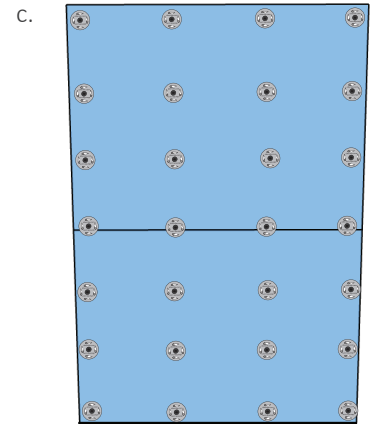
Installation - Step 2 - Fasten Uberboard Vapor panels to studs



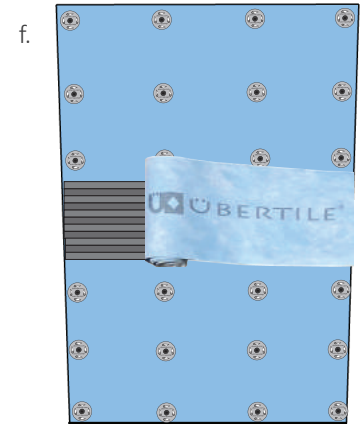
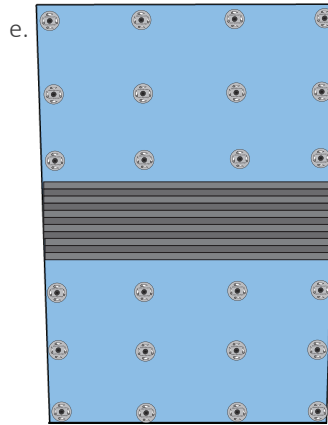
Fasten the panel to the studwork using **Uberboard Vapor Stainless Steel screw & washer**.



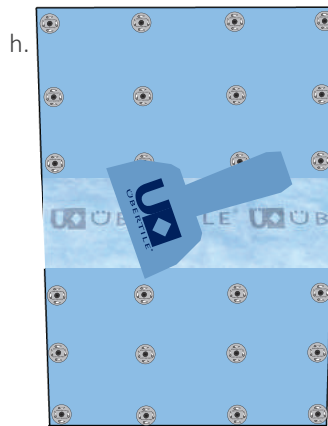
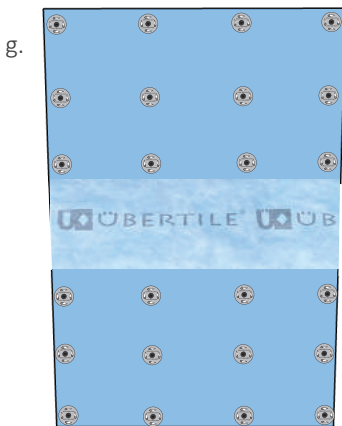
Continue to fasten the panel to the studwork using **Uberboard Vapor Stainless Steel screw / washer** until all panels are installed.



To seal panel seams & intersections, use a **1/4" x 3/16" V-notch Trowel**, spread **Thinset** onto **Uberboard Vapor** surface, overlapping each seam by a minimum 2".



Apply **Vapor Fabric** into still wet **Thinset**.

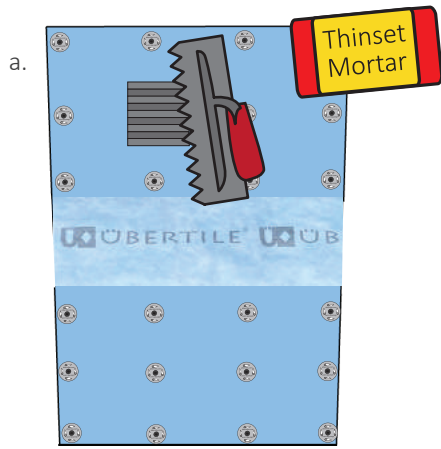


With thinset still wet, using flat trowel, smooth out **Vapor Fabric**, pressing out air pockets and excess **Thinset**.

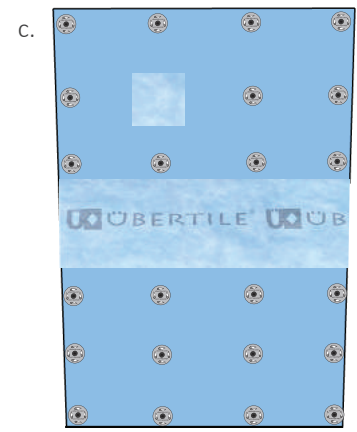
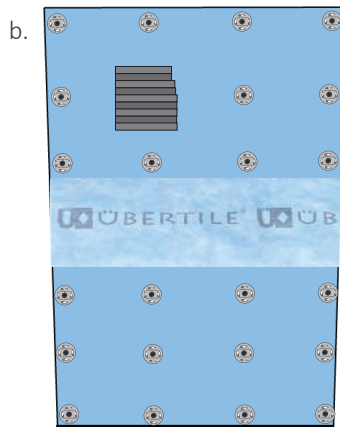


Finish by installing **Fabric Inside / Outside Corners** using same technique as described in steps 2d-2h.

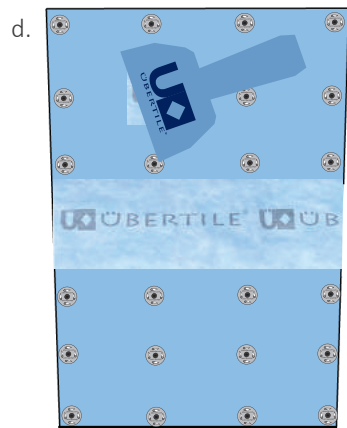
Installation - Step 3 - Seal fasteners & penetrations



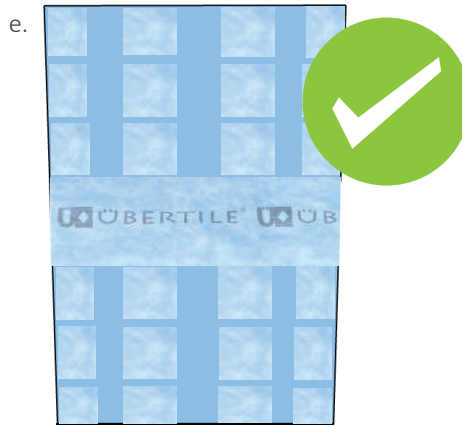
To seal the **Stainless Steel Fastener** penetrations use a **1/4" x 3/16" V-notch Trowel**, spread **Thinset** overtop the **Fastener** surface overlapping by a minimum 2".



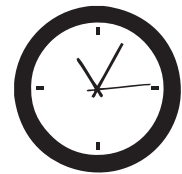
Apply **Vapor Fabric** into still wet **Thinset**.



With thinset still wet, use a flat trowel, smooth out fabric, pressing out air pockets and excess **Thinset**.



Install **Mixing Valve and Pipe Seals** using the same technique as described in steps 3a-e.



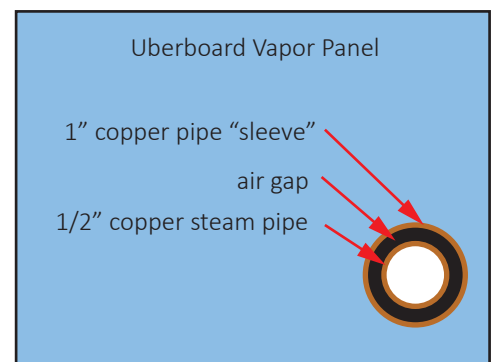
Wait 24 hours for after installation of materials before installation of tiles or flood testing.

Note regarding steam pipe entrance into shower:

The steam pipe which enters the shower (eventually through the Uberboard Vapor Panel) is hot, temperatures of upto 100°C. The deformation temperature of XPS foam happens at temperatures above +60C. **Thus if the steam pipe contacts the XPS foam, it will deform the foam.**

For this reason, use a "copper sleeve" between the steam pipe and Uberboard Vapor with an air gap at the steam pipe.

Use High Temp Silicone to seal the gap to the Uberboard.



Important information:

- Tile Requirements:
 - Tiles must be rated for steam shower use.
 - Use only Porcelain or Ceramic tiles.
 - Ceramic tiles are only permitted for intermittently use steam showers.
 - If the shower will be used commercially or continuously, use a Porcelain tile.
 - Maximum allowable finished tile weight (including grout and setting materials) is 7lbs / sqft.
 - Minimum tile size is 2" x 2" (50mm x 50mm).
 - Minimum tile thickness is 6mm (1/4") thick.
 - There is no maximum tile size, however use of larger tiles requires a greater tolerance of surface flatness when installing the tiles to ensure adequate thinset coverage.
- Use Uberboard Vapor **Stainless Steel** Screws and Washers! Do not use galvanized Screws / Washers.
- Epoxy Grout is required for all steam showers.
- Do not use Uberboard Classic or Uberboard Tech panels for steam showers. Use Uberboard Vapor panels only.
- Do not use with Uberseal™ sealant! Use the Vapor fabric only!
- For Intermittent use steam showers use an ISO 13007 C2TES2 rated thinset to adhere the tiles.
- For Continuous use steam showers use only ANSI A118.3 epoxy thinset to adhere tiles
- Commercial or continuous steam showers require prior written approval. Contact ubertile to obtain approval.
- NEVER use mastic(s), premixed or solvent based adhesives
- Movement joints (ie silicone caulk) must be included in the finished tile installation at all changes or intersections in plane.
- Do not expose any parts of the products to solvents, or temperatures over 45 degrees Celsius
- When storing the panels for a long duration of time, store flat and away from UV light (sunlight)
- Follow all applicable building codes, TTMAC , NTCA and / or TCNA requirements
- For interior use only
- The steam pipe will be hot! Ensure to leave 1/2" clearance around the steam pipes to the Uberboard panel
- If the steam pipe will exceed 90°C, use Chemlink™ Durasil™ Hi Temp Silicone to seal between Uberboard panel and the steam pipe.